

CLAIM LISTING:

1. (Currently amended) An optical wave guide comprising a core, wherein said core comprises a polymer and at least one organic compound introduced therein, characterized in that the organic compound is selected from the group consisting of a condensed aromatic ring system ~~[[with]]~~of two ~~[[or]]~~ more isocyclic ring systems ~~[[or]]~~ and a condensed aromatic ring system of heterocyclic aromatic rings, wherein each heteroatom is selected from the group consisting of nitrogen and oxygen and is assigned to precisely one ring if the ring is heterocyclic.
2. (Previously presented) The optical waveguide according to claim 1, characterized in that the condensed aromatic ring system comprises three or more rings.
3. (Previously presented) The optical waveguide according to claim 2, characterized by an angular arrangement of the rings in the condensed aromatic ring system.
4. (Previously presented) The optical waveguide according to claim 1, characterized in that at least one heteroatom is nitrogen.

5. (Previously presented) The optical waveguide according to claim 1, characterized in that the condensed aromatic ring system comprises phenanthrene, fluorene, benzanthrazene or triphenylene.
6. (Previously presented) The optical waveguide according to claim 1, characterized in that the condensed aromatic ring system comprises benzoquinoline, 1,10-phenanthroline, phenanthridine, or 1,7-phenantroline.
7. (Previously presented) The optical waveguide according to claim 1, characterized in that the condensed aromatic ring system is composed of 1,2-benzioxazole or benzofurane.
8. (Previously presented) The optical waveguide according to claim 1, characterized in that the condensed aromatic ring system comprises anthracene, 2,3-benzanthracene, or 11H-benzofluorene.
9. **(Canceled)**
10. (Previously presented) The optical waveguide of claim 1, wherein the polymer is polymethylmethacrylate or polyester.

11. (Previously presented) The optical waveguide of claim 5, wherein the polymer is polymethylmethacrylate or polyester.

12. (Previously presented) The optical waveguide of claim 6, wherein the polymer is polymethylmethacrylate or polyester.

13. (Previously presented) The optical waveguide of claim 7, wherein the polymer is polymethylmethacrylate or polyester.

14. (Previously presented) The optical waveguide of claim 8, wherein the polymer is polymethylmethacrylate or polyester.